The invention described and claimed in the above application results from Applicants' finding that CD44 (the haluronate receptor) facilitates HIV infection in human cells. When CD44 is blocked by binding to an anti-CD44 antibody, there is a 40-80% reduction of HIV infection/expression in human monocytes *in vitro*. Applicants disclose in the application that the natural ligand of CD44, haluronate or haluronic acid, inhibits infection/expression up to 85%. In contrast, chondroitin sulfate, a polyanion that does not bind CD44, reportedly has little if any inhibitory activity.

The Weinhold Declaration of record makes clear the background against which the present invention was made and the technical basis for Applicants' assertions regarding predictability of efficacy *in vivo*, given the available data.

Declarant Weinhold points out that the ability to block HIV infection of mononuclear phagocytes using CD44 blocking agents is of obvious significance. Mononuclear phagocytes are concentrated in the mucosa (for example, the vaginal mucosa) and thus are important target cells. Declarant Weinhold indicates that from a therapeutic standpoint, these target cells are readily accessible. That is, the CD44 blocking agent can be administered topically to the mucosal surface or, for example, within a condom. The application in fact makes specific reference to

loco-regional (e.g., intravaginal) administration. Alternatively, the blocking agent can be administered parenterally.

Declarant Weinhold comments that the concept underlying the invention is a straightforward one and indicates that he sees little reason to doubt the effectiveness of the approach. Declarant Weinhold goes on in paragraphs (5) and (6) of his Declaration to provide basis for his view in this regard.

It is submitted that the Examiner has not given proper weight to this Declaration. Indeed, he has essentially dismissed the Declarant's statements with the unsupported comment "such studies do not necessarily correlate with inhibiting CD44-facilitated HIV infection...". Clearly the Declarant, one highly skilled in the relevant art, has a different view. The Examiner is requested to support his comments or give the evidence provided proper consideration.

As regards the Examiner's comments at the top of page 4 of the Action, relating to Rivadeneira et al, clarification is requested. On their face, those comments are believed to miss the point of the present invention. Mononuclear phagocytes are of great importance in the cell to cell transmission of the virus. It is clear on its face that blocking such transmission is therapeutically significant. The Examiner's comments suggests that he takes a different view, again, he is urged to support his position.

Finally, the Examiner is yet again reminded that a patent applicant enjoys the presumption that the invention can be practiced as claimed. The burden is on the examiner to provide evidence or reasoning inconsistent with the disclosure as to why such would not be the case. Respectfully, the broad brush assertions made by the Examiner here do not constitute such evidence or reasoning.

Reconsideration is requested.

Claims 14-19 stand rejected under 35 USC 112, first paragraph. The rejection is traversed.

Claim 16, from which the remaining claims depend, is drawn to a method of inhibiting CD44-facilitated HIV infection of a mononuclear phagocyte. The claim is not drawn to an agent that binds CD44 molecules present on the cell surface. As indicated above, it was Applicants that discovered, and disclose in the subject application, that CD44 facilitates HIV infection in humans. Given the nature of their contribution, it is entirely appropriate they be entitled to a method claim that covers the use of any and all agents that bind CD44 and in so doing block HIV infection. The Examiner is urged to indicate the basis for his position that, in situations such as this, specific characterizing information is required for all agents that serve the intended purpose in the context of the claimed method.

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It is again submitted that, to require that Applicants' method claims be limited to any particular agent would be to unduly restrict Applicants in the scope of protection to which they are rightly entitled. Reconsideration is requested.

This application is submitted to be in condition for allowance and a Notice to the effect is requested.

Respectfully submitted,

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